**Attachment A** 



## Standard Authorization Request WECC-0142 BAL-002-WECC-2a Contingency Reserve Request to Retire

## **Overview**

This Standard Authorization Request (SAR) was: 1) received August 14, 2020, 2) deemed complete on August 27, 2020, 3) input into the WECC SAR software on October 20, 2020, for WECC Standards Committee (WSC) review on October 22, 2020.

This SAR can be reviewed in its originally submitted format on the WECC-0142 project page at the Standard Authorization Request accordion.

If you have questions regarding this SAR, please contact W. Shannon Black at <u>sblack@wecc.org</u>, (503) 307-5782.

## Introduction

This project is a request to retire BAL-002-WECC-2 Contingency Reserve in its entirety.

# **Requester Information**

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# **Type of Request**

This is a request to retire BAL-002-WECC-2a Contingency Reserve in its entirety.

# Create, Modify, Retire or Review a Document

#### Requested Action (Select one)

• This is a request to retire BAL-002-WECC-2a Contingency Reserve in its entirety.

#### Document Type (Select one)

• WECC Regional Standard

#### Issue

This SAR is assigned WECC Tracking Number WECC-0142. It was deemed valid and complete on August 27, 2020, and vetted by the WSC on October 22, 2020.

Retirement of BAL-002-WECC-2a Contingency Reserve would reduce required reserves in WECC without diminishing the ability to meet the deployment requirement. Freeing up reserves from the Contingency Reserve requirement would increase the resources available to manage variable resource and accommodate increased renewable resource integration.

The existing WECC-0115 BAL-002-WECC-2a Contingency Reserve sets a Balancing Authority's (BA) or Reserve Sharing Groups' (RSG) (Responsible Entity) Contingency Reserve requirement to the greater of the Most Severe Single Contingency (MSSC) or 3% of Responsible Entity generation.

By contrast, NERC Standard BAL-002-3 Disturbance Control Standard—Contingency Reserve for Recovery from a Balancing Contingency Event, Requirement R1.3.2 states that the BA or RSG is not subject to compliance with Requirement R1 for multiple events that exceed the MSSC. NERC BAL-002-3 requires the Responsible Entity to deploy Contingency Reserve up to the MSSC but does not require Contingency Reserve deployment beyond the MSSC. BAL-002-WECC-2a requires a Responsible Entity to maintain Contingency Reserve that equals or exceeds the MSSC. In a larger BA or RSG, the summation of 3% of load plus 3% of generation exceeds the MSSC amount.

Requiring a Contingency Reserve capacity amount exceeding MSSC reduces the system capacity that is available to meet other reliability needs of that BA or RSG or to assist others in the Western Interconnection. As the interconnection resource mix transitions to a greater resource share provided by renewable variable energy resources, this freed-up capacity could be used to provide real-time load and resource balancing rather than being allocated to Contingency Reserve. At the same time, Contingency reserve would be made available in sufficient quantity to meet any MSSC event and



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preserve reliability of the interconnection for the unplanned loss of a resource. The history behind the 3% load and 3% generation (see attachment Transition from 5-7 to 3-3), which was receded by the 5% hydro, 7% thermal (50% spin, 50% non-spin) was described in 2005 by Merrill Schultz, see attachment History of WECC reserve 5-7 Spin Merrill Schultz 03032005, moved to the 3% load and 3% generation to resolve inconsistency in the responsibility for reserves supporting interchange transactions and as a consensus recognition that the 5% hydro and 7% thermal could be relaxed on frequency response studies.

### **Proposed Remedy**

Retirement of this Standard will allow a BA or RSG to allocate excess capacity to meet other reliability needs in the BA, RSG, or the Western Interconnection.

FERC and the industry have determined that the amount of Contingency Reserve needed to maintain an adequate level of reliability is the amount of Contingency Reserve needed to replace the MSSC resource. Holding Contingency Reserve in excess of MSSC precludes using operating reserve for other purposes, particularly load and resource balancing in real-time. As the grid transitions from conventional synchronous generation to more variable renewable resources, increasing capacity will be required to manage the variability and faster ramping requirement of these resources. Allocating reserve in excess of that needed to maintain an adequate level of reliability (MSSC) ultimately detracts from reliability .

BAL-002-WECC-2a requires a Responsible Entity to restore Contingency Reserve within 60 minutes of the initiating event (as opposed to up to 105 minutes in BAL-002), or 45 minutes sooner than required by BAL-002. With respect to impacts to the time to restore Contingency Reserve, FERC and the industry have determined tat 90 minutes from the end of the recovery period (up to 15 minutes) is sufficient to maintain an adequate level of reliability. This creates potential reliability issues as a Responsible Entity attempts to rebalance in an arbitrarily shorter period than that required in the NERC BAL-002. In attempting to meet the 60-minute restoration requirement, a Responsible Entity has two options. First, the BA must carry significantly more Contingency Reserve than is required to maintain an adequate level of reliability, or second, be prepared to enter an Emergency Alert 3 and reduce load to restore Contingency Reserve. Entering into an Energy Emergency Alert indicates reduced reliability. Given normal scheduling practices, a 90-minute restoration time allows a Responsible Entity to restore Contingency Reserve in less than 60 minutes from the initiating event, resulting in an Energy Emergency Alert situation.

In addition, many entities own BES equipment in more than one interconnection. Having a single Standard helps these entities remain in compliance with the Standard.



### **Applicable Entities**

- Balancing Authority
- Reserve Sharing Group

### **Detailed Description**

Retire BAL-002-WECC-2a Contingency Reserve. The current Standard has four major differences from BAL-002-3 Disturbance Control Standard—Contingency Reserve for Recovery from a Balancing Contingency Event.

- 1) Contingency Reserve Requirement
  - a. BAL-002-3 requires the Responsible Entity to have Contingency Reserve equal to, or greater than, the Responsible Entity's MSSC.
  - b. BAL-002-WECC-2a requires the Responsible Entity to have Contingency Reserve equal to, or greater than, the greater of: i) the Responsible Entity's MSSC or, ii) the sum of 3% of the hourly integrated load plus 3% of hourly integrated generation.
- 2) Spinning Reserve Requirement
  - a. BAL-002-3 does not have a Spinning Reserve requirement.
  - b. BAL-002-WECC-2a currently has a Spinning Reserve requirement of one half of total Contingency Reserve obligation (currently under review by FERC for removal).
- 3) Reserve Restoration
  - a. BAL-002-3 requires reserve to be restored at the end of the Contingency Reserve Restoration Period (a period not exceeding 90 minutes following the end of the Contingency Event Recovery Period). The Contingency Event Recovery Period extends 15 minutes from the beginning of a Reportable Balancing Contingency Event.
  - b. BAL-002-WECC-2a requires restoration of Contingency Reserve within 60 minutes following the event.
- 4) Operating Reserve Requirement modifications due to transactions
  - a. BAL-002-3 does not have requirements to modify Operating Reserve due to reserve transactions with other entities.
  - b. BAL-002-WECC-2a requires Operating Reserve be held, in addition to minimum Contingency Reserve requirements, for interchange Transactions that are designated as part of the entity's Operating Reserve—Supplemental.

#### Discussion

 The MSSC is the reliability standard for all interconnections but the Western Interconnection. This ensures that all entities can recover ACE for their MSSC within 15 minutes. Holding a value greater than that (such as 3% generation and 3% load), which does not have any rigorous



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study around it, does not enhance reliability of the interconnection. In fact, it decreases reliability of the interconnection by allocating resources as Contingency Reserve that could be used for other operational needs to maintain reliability. By requiring Contingency Reserve beyond MSSC and in excess of what is necessary to maintain an adequate level of reliability, additional resources are needed to maintain reliability for other needs, such as variability of resources and fast ramping.

- 2) The spinning reserve requirement (R2) will no longer be part of the standard by the time this SAR is addressed.
- 3) With respect to the time to restore Contingency Reserve, FERC and the industry have determined that 90 minutes from the end of the recovery period (up to 15 minutes) is sufficient to maintain an adequate level of reliability. BAL-002-WECC-2a requires a Responsible Entity to restore Contingency Reserve within 60 minutes of the initiating event (as opposed to up to 105 minutes in BAL-002), or 45 minutes sooner. This creates potential reliability issues as a Responsible Entity attempts to rebalance in an arbitrarily shorter period than that required in the NERC BAL-002. In attempting to meet the 60-minute restoration requirement, a Responsible Entity has two options. First, the BA must carry significantly more Contingency Reserve than is required to maintain an adequate level of reliability, or second, be prepared to enter an Energy Emergency Alert 3 and reduce load to restore contingency reserve. By definition, entering an Energy Emergency Alert indicates reduced reliability. Given normal scheduling practices, a 90-minute restoration time allows a Responsibility Entity to restore Contingency Reserve using normal practices rather than attempting to restore Contingency Reserve in less than 60 minutes from the initiating event, resulting in an Energy Emergency Alert situation.
- 4) Standards should not dictate how commercial arrangements are conducted.

### **Affected Reliability Principles**

**Reliability Principle 2**—The frequency and voltage of interconnected bulk electric systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand.

## **Document Information**

NA

# **Reference Uploads**

- Final NWPP RSG SAR for retirement of BAL-002-WECC-2a.docx 410.78 kb
- History of WECC Reserve 5-7 Spin Merrill Schultz 03032005.docx 15.94 kb



- Transition from 5-7 to 3-3.docx 13.23 kb
- WECC Standard BAL-002-WECC-2a-Contingency Reserve.pdf 320.49 kb

#### Provide additional comments (if needed).

Costs are unnecessarily increased in the interconnection by misallocating resources as Contingency Reserve that could be used for other operational needs to maintain reliability. By requiring Contingency Reserve beyond MSSC and in excess of what is necessary to maintain an adequate level of reliability, additional resources are needed to maintain reliability for other needs, such as variability and fast ramping. Retirement of BAL-002-WECC-2a will allow a BA to allocate capacity resources to most efficiently meet the needs of the BA, reducing overall costs.

The NWPP RSG leadership discussed the SAR with the WECC Performance Work Group and Operating Committee and there was no negative feedback received.

The 24 Balancing Authorities of the NWPP RSG are in full support of this SAR.

